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|               |              |
|---------------|--------------|
| EXAMINER      |              |
| CASCA, FRED A |              |
| ART UNIT      | PAPER NUMBER |
| 2617          |              |

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE  | DELIVERY MODE |
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/674,902

Applicant(s)

CURCIO ET AL.

Examiner

Fred A. Casca

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12, 14, 15 and 17-25 is/are rejected.
- 7) ☒ Claim(s) 13 and 16 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ ...Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>02/04/2004</u> | 6) <input type="checkbox"/> Other: ____  |

## DETAILED ACTION

### *Objections*

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.
2. Claim 18-20 are objected to under 37 CFR 1.75(c) as being in improper form because multiple dependent claim 17 also depends on any preceding claim. See MPEP § 608.01(n). Accordingly, the claim 18-20 not been further treated on the merits.

### *Claim Rejections - 35 USC § 101*

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 24-25 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 24 and 25 drawn to a "program" *per se* as recited in the preamble and as such is non-statutory subject matter. See MPEP § 2106.IV.B.1.a. Data structures not claimed as embodied in computer readable media are descriptive material *per se* and are not statutory because they are not capable of causing functional change in the computer. See, e.g., *Warmerdam*, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure *per se* held nonstatutory). Such claimed data structures do not define any structural and functional interrelationships between the data structure and other claimed aspects of the invention, which permit the data structure's functionality to be realized. In contrast, a claimed computer readable medium encoded with a data structure defines structural and functional interrelationships between the data structure and the computer software and hardware components which permit

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the data structure's functionality to be realized, and is thus statutory. Similarly, computer programs claimed as computer listings *per se*, i.e., the descriptions or expressions of the programs are not physical "things." They are neither computer components nor statutory processes, as they are not "acts" being performed. Such claimed computer programs do not define any structural and functional interrelationships between the computer program and other claimed elements of a computer, which permit the computer program's functionality to be realized.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-4, 7-12, 14-15 and 17-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sugirtharaj (WO 01/30090 A2) in view of English (US Pub. No. 2003/0002460 A1).

Referring to claim 1, Sugirtharaj discloses a method for streaming of media from a streaming server (111) to a mobile client device (101) over an air-interface (page 1, lines 7-20, "wireless transmission of data", "GPRS"), wherein the method comprises:

the streaming server (111) to send streaming media which the mobile client device (101) is not able to receive due to a cell reselection (page 1, lines 25-26, page 2, lines 4-15 and page 3, lines 16-20, "If a loss occurs, or if there are bit errors during transmission, such loss sensitive

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data must be re-transmitted”, “buffers that temporarily store packets of data”, “The stored data is then available for transmission to the mobile station”, note that data that was lost due cell reselection (handoff) is stored in a buffer and to be transmitted to the mobile station).

Sugirtharaj does not specifically disclose the **requesting** the streaming server (111) to send streaming media.

English discloses **requesting** the streaming server (111) to send streaming media (paragraph 71, “if mobile station 6 requests data transmission from a different base station 4 in the active set, the new base station 4 transmits the remaining data units”, note that corrupted or lost data due handoff is transmitted to the mobile station after a request by the mobile station).

It would have been obvious to one of the ordinary skills in the art at the time of invention to modify the method of Sugirtharaj by incorporating the teachings of English and consequently providing **requesting** the streaming server to send streaming media which the mobile client device is not able to receive due to a cell reselection, for the purpose of identifying, requesting and transmitting the missing data as requested so that missing or corrupted data is retransmitted without delay, and consequently providing an efficient communication of media during cell selection events.

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Referring to claim 2, the combinations of Sugirtharaj/English disclose a method according to claim 1, and further disclose the streaming server is provided with a starting point at which to start sending (Sugirtharaj, page 2, lines 6-15).

Referring to claim 3, the combinations of Sugirtharaj/English disclose a method according to claim 1, and further disclose streaming server (111) sends the streaming media which the mobile client device (101) is not able to receive due to said cell reselection as well as a remaining portion of streaming media in response to the request (Sugirtharaj, page 1, lines 25-26, page 2, lines 4-15 and page 3, lines 16-20, and English, paragraph 71, see rejection of claim 1 above please).

Referring to claim 4, the combinations of Sugirtharaj/English disclose a method according to claim 1, and further disclose the cell reselection comprises a cell reselection period during which the mobile client device (101) is not able to receive streaming media (Sugirtharaj, page 1, lines 25-26, page 2, lines 4-15 and page 3, lines 16-20, "If a loss occurs, or if there are bit errors during transmission, such loss sensitive data must be re-transmitted), and further disclose ending from the mobile client device (101) to the streaming server (111), after the cell reselection period, a resending request which requests the streaming server (111) to resend streaming media which the mobile client device (101) was not able to receive during the cell reselection period (see rejection of claim 1 above please).

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Referring to claim 7, the combinations of Sugirtharaj/English disclose a method according to claim 1, and further disclose the streaming media is temporarily stored in a temporary store (240), such as a buffer, at the client device (101) (Sugirtharaj, page 1, lines 25-26, page 2, lines 4-15 and page 3, lines 16-20).

Referring to claim 8, the combinations of Sugirtharaj/English disclose a method according to claim 7.

~~The combinations of Sugirtharaj/English do not disclose the temporary store (240) has a~~  
size longer in time than a cell reselection period.

It would have been obvious design choice to modify the method Sugirtharaj/English by limiting the temporary store (240) to have a size longer in time than a cell reselection period, since applicant has not disclosed that doing so solves any stated problems or is for any particular purpose.

Referring to claim 9, the combinations of Sugirtharaj/English disclose a method according to claim 7.

~~The combinations of Sugirtharaj/English do not disclose streaming media at a rate higher~~  
than the playing rate of that media.

It would have been obvious design choice to modify the method Sugirtharaj/English by setting streaming media at a rate higher than the playing rate of that media, since applicant has not disclosed that doing so solves any stated problems or is for any particular purpose.

Referring to claim 10, the combinations of Sugirtharaj/English disclose a method according to claim 9, and further disclose a bandwidth or desired transmission bit rate with speeding factor is communicated to the streaming server (111) in a request (page 1, lines 25-

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26, page 2, lines 4-15 and page 3, lines 16-20, note that media is inherently transmitted with a desired transmission so that it is received properly).

Referring to 11, the combinations of Sugirtharaj/English disclose a method according to claim 9.

The combinations of Sugirtharaj/English do not disclose streaming media is stored at the mobile client device (101) at a rate higher than the playing rate.

It would have been obvious design choice to modify the method Sugirtharaj/English by setting streaming media to be stored at the mobile client device at a rate higher than the playing rate, since applicant has not disclosed that doing so solves any stated problems or is for any particular purpose.

Referring to claim 12, the combinations of Sugirtharaj/English disclose a method according to claim 9, and further disclose the streaming server is subsequently requested to resume an original configuration (Sugirtharaj, page 1, lines 25-26, page 2, lines 4-15 and page 3, lines 16-20).

Referring to claim 14, the combinations of Sugirtharaj/English disclose a method according to claim 1, and further disclose the streaming server has a set of media streams available for transmission in which the same media content has been encoded at different bit rates (see rejection of claims 8-9 please).

Referring to claim 15, the combinations of Sugirtharaj/English disclose a method according to claim 14, and further disclose information on the available set of media streams is



beforehand communicated to the mobile client device (101) in a streaming session setup (Sugirtharaj, page 1, lines 25-26, page 2, lines 4-15 and page 3, lines 16-20).

Referring to claim 17, the combinations of Sugirtharaj/English disclose a method according to any preceding claim, and further the streaming media comprise one of the following: a video stream, an audio stream, another stream of single media, a multimedia stream (Sugirtharaj, page 1, lines 25-26, page 2, lines 4-15 and page 3, lines 16-20).

Referring to claim 18, the combinations of Sugirtharaj/English disclose a method according to any preceding claim, and further disclose the streaming server sends streaming media to the mobile client device via a mobile communications network (Sugirtharaj, page 1, lines 25-26, page 2, lines 4-15 and page 3, lines 16-20).

Referring to claim 19, the combinations of Sugirtharaj/English disclose a method according to any preceding claim, and further disclose the mobile communications network comprises a mobile packet radio network, such as a GPRS (General Packet Radio Service) network (Sugirtharaj, page 1, lines 15-26, page 2, lines 4-15 and page 3, lines 16-20).

Referring to claim 20, the combinations of Sugirtharaj/English disclose a method according to any preceding claim, and further disclose cell reselection is performed between two base stations (BS1, BS2) which are selected from a group comprising: base stations belonging to a GPRS system, base stations belonging to a third generation mobile

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communications system (Sugirtharaj, page 1, lines 15-26, page 2, lines 4-15 and page 3, lines 16-20).

Referring to claims 21-25, claims 21, 22, 23, 24 and 25 defines a mobile client device, a streaming server, a system and computer programs reciting features analogous to the features of the method defined by claim 1 (as rejected above). Thus, the combinations of Sugirtharaj/English disclose all elements of claims 21-25 (please see the rejection of claim 1 above).

7. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sugirtharaj (WO 01/30090 A2) in view of English (US Pub. No. 2003/0002460 A1) and further in view of Cranor et al (2003/0112792 A1).

Referring to claim 5, the combinations of Sugirtharaj/English disclose a method according to claim 4.

The combinations of Sugirtharaj/English does not disclose resending request is generated according to RTSP protocol (Real Time Streaming Protocol).

However RTSP protocol is well known in art as explained in RFC 2326 as a protocol for use in streaming media. And further, Cranor discloses RTCP in a retransmission scheme (paragraph 53).

It would have been obvious to one of the ordinary skills in the art at the time of the invention to modify the method of Sugirtharaj/English by incorporating the teachings of Cranor

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for the purpose of allowing a client to remotely control the streaming media server, issuing VCR-like commands such as "play" and "pause", as RTSP allows doing so.

Referring to claim 6, the combinations of Sugirtharaj/English disclose a method according to claim 4.

The combination of Sugirtharaj/English does not disclose the resending request is implemented by an RTSP PAUSE/PLAY message pair.

Cranor discloses resending request is implemented by an RTSP PAUSE/PLAY message pair (par 53, please see the rejection of claim 5 above).

It would have been obvious to one of the ordinary skills in the art at the time of the invention to modify the method of Sugirtharaj/English by incorporating the teachings of Cranor for the purpose of allowing a client to remotely control the streaming media server.

*Allowable Subject Matter*

8. Claims 13 and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is the examiner's statement of reasons for allowance: References Sugirtharaj (WO 01/30090 A2), English (US Pub. No. 2003/0002460 A1) and Cranor et al (2003/0112792 A1) are made of record as teaching the art of transmitting streaming media from a streaming server to a mobile client device over an air-interface. However, none of the cited

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prior art teaches or suggests directly or indirectly the limitation, “temporary store (240) decreases during the cell reselection, and the streaming server is requested to send the not received streaming media although the temporary store (240) has not become totally empty, and said requesting is performed without pausing playback at the mobile client device (101)” as in claim 13 and “wherein the streaming server (111) is requested to switch from sending a higher bit rate media stream to sending a lower bit rate media stream at an increased speed”, as in claim 16, in combination with other limitation of the independent claims 1, and 26-29. The applicant has described the process of communication between the scanning subsystem and the application program.

*Conclusion*

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fred A. Casca whose telephone number is (571) 272-7918. The examiner can normally be reached on Monday through Friday from 9 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid, can be reached at (571) 272-7922. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
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